

THE

QL

MAGAZINE

Volume 31 Issue 1: FEB-MAR

Geodesiques !

QL is 30 this year

Turbo Part 3

A quick look at QL-SD



QUANTA
QL USERS & TINKERERS ASSOCIATION

QUANTA

INFORMATION ON THE ASSOCIATION

Membership of QUANTA, the independent QL user group, is by annual subscription. The Membership Secretary can supply full details. Copies of the association's constitution & annual accounts are available from the Secretary. There is an extensive software library and active national subgroups. Details are in the membership guide and occasionally in this magazine.

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- SEE SEPARATE BOOKLET

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'Like' us on Facebook at [www.Facebook.com/
QUANTA.org](http://www.Facebook.com/QUANTA.org)

Currently watching this video? [http://
www.youtube.com/watch?v=hzdYoEA0CQw](http://www.youtube.com/watch?v=hzdYoEA0CQw)

Fully recovered from the seasonal festivities? Well 2014 seems like it could be a promising year. There are a few things on the horizon that should excite and satisfy some long running issues with the BBQL, watch this space as they say.

Those of you who are particular observant will have noticed some slight changes to the magazine as is customary around this time of the year. This year however, particularly with the 'QL is 30' there are some significant enhancements, but it is still the QUANTA magazine. Perhaps you could write in to the Editor by email or snail mail if you can identify what or why.

The QL-SD is one of the hardware devices that have made an appearance, I was fortunate to win the bid on the Sell-My-Retro website and I have in the magazine some initial thoughts and images of the device, suffice to say I won't be connecting it up yet as I am currently in a longwinded moving process and all (except my laptop) my QL equipment is fully boxed. Yes I am going into withdrawal symptoms.

You will also see in this issue, contributions from George Gwilt and Steve Poole, In the next issue George Gwilt responds to Steve Poole's 'Accurate Looping', however we still need more copy, information about that can be found at the end of the magazine.

The AGM is almost upon us and that is your opportunity to have a voice on how QUANTA is run for the next year, details about that are in the Chairman's Report. Here's looking forward to an interesting year.

Ed.

If you have QL-related news items that you'd like us to include on this page, please get in touch with News Editor - Dilwyn Jones at news@quanta.org.uk

Sinclair QL Games Collection SPECIAL OFFER

Rich Mellor of RWAP Software writes:

To celebrate the 30th Anniversary of the Sinclair QL, we are now offering the QL Games Collection Pack 1 at 50% off until the end of March – just £5 with email delivery! The games included in this package are:

Jungle Eddi by Stefan Kuhne

Hoverzone by R G Riley

Deathstrike by Damon Chaplin and T. Bovingdon

Cuthbert in Space by Steve Bak and S J Proctor

QL Hopper by Steve Bak and S J Proctor

QL Pengi by Jochen Merz and R. Bieniek

QL Vroom by Daniel Macré

Stone Raider II by Alex J Herbert

The King by C H Robertson Consultants

The Lost Pharaoh by Stefan Kuhne

<http://www.sellmyretro.com/offer/details/Sinclair-QL-Games-Collection-1-2152>



QL QaLendar 2014

That most indispensable of annual QL accessories, the QaLendar (or QL Calendar) for 2014 is now available to download from:

<http://www.dilwyn.me.uk/gen/calendar/calendar.html>

Adorned with pictures of all sorts of QL-related stuff, it's available as a PDF file (about 0.5MB download) or Word document (about 5.5MB download).

Online QL Service Manual

An HTML version of the QL Service Manual is now available, thanks to Urs König, at <http://www.sinclairql.net/srv/index.html> - part of the new [sinclairql.net](http://www.sinclairql.net), and the repository of the Sinclair QL Preservation Project (SQPP). The HTML version of the QL Service Manual was originally the work of Juanjo Ruiz Leo and more recently resurrected and preserved by Urs.



The online QL Service Manual

Classic 70s and 80s Games Go Online

The Internet Archive has made available a number of classic 70s and 80s games online to play in a browser. OK, nostalgic and all that, but the real interest for us is that some of this is based on a JavaScript implementation of the MESS emulator system, which included the Sinclair QL when I last reviewed it in this magazine, although the online version is so far based on only a handful of games machines from that era such as the Atari games consoles.

The online version is called JSMESS.

There is a news feature about it on the BBC website at:

<http://www.bbc.co.uk/news/technology-25527786>

The Internet Archive feature on this is at:

<https://archive.org/details/consolelivingroom>

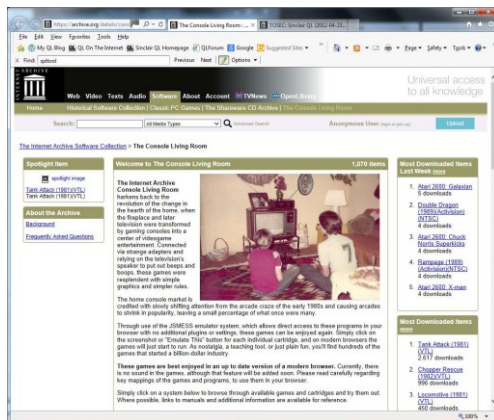
(it's referred to as the Console Living Room online).

Where it gets even more interesting is if you search for 'Sinclair QL'. Try:

https://archive.org/details/Sinclair_QL_TOSEC_2012_04_23

(note it has several underscores in the link above which may be hidden by the underlining).

Scroll down to the bottom of that page and check out the links to some of Timo Salmi's old QL software, for example. The ones I have looked at are written in SuperBASIC. For further information about the MESS system, visit www.mess.org



Internet Archive – The Console Living Room

The Last Five Years

Geoff Wicks has written an article about the last five years of the QL. He discusses the positives and disappointments of the QL

QUO VADIS
DESIGN

Independent Information
Technology Services

www.ql-qvd.com

QL/QDOS/SMSQ/E Software

QUO VADIS DESIGN Independent Information Technology Services

QL/QDOS/SMSQ/E Software

Home Products Support Company Contact

Welcome

Quo Vadis Design sells software for the Socratic Quantum Leap computer (QL) and variants including a new OS called SMSQ/E.

The QL is a computer in its 25th year Anniversary.

News

- QVD QL News Blog - keep up to date
[News Blog](#)
24/04/2009
- Quo Vadis Design Website Launched
01/02/2009

FEATURED PRODUCT



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**QPC2 IS NOW FREE AND
AVAILABLE FROM MARCEL
KILGUS WEBSITE**

<http://www.kilgus.net/qpc/index.html>

**Congratulations to Marcel
on becoming a Father**

**Check the QL News Blog on
our website for updates.
www.ql-qvd.com/blog**

scene in recent years. The article is well worth reading, as you may not have realised so much happened on the QL scene in the last few years. Read it on his very popular (according to the increase in number of hits on it since the closure of QL Today magazine) News page at <http://www.gwicks.net/justwords.html>

QL-SD Is Here

The QL-SD is finally available. Designed by Peter Graf and with software developed from original drivers from the designer of the Ser-Usb device, QL-SD was built and made available on a no-profit basis by members of the German QL community (<http://forum.tlienhard.com/phpBB3/viewforum.php?f=9>), including producing a manual for it. The units themselves were built by Paul Veltjens, who initially made a batch of 12. Support was through the German QL forums and the devices will be available via SellMyRetro.com, with the price expected to be around €60. The first unit was auctioned off on SellMyRetro.com and apparently fetched a price of £128 in the end after a total of 16 bids starting at £40 – see <http://www.sellmyretro.com/offer/details/QL-SD-internal-SDHC-Card-Interface-for-QL-3596> for details, a picture and a copy of the manual!

A few weeks ago, I got to try out an older prototype version of QL-SD which hooks up to a QL via the bi-directional parallel port of a Super Gold Card. Peter sent me a version of the QL-SD software to try it out and I eventually got it working after a few mistakes – read about my experiences with it on my blog at http://dilwyn2.wordpress.com/2014/01/19/ql-sd-for-sgc-par-port/?relatedposts_exclude=164

While this particular version isn't in production at the moment, perhaps Peter Graf would consider making a few if enough people ask him nicely! Given that early standard QL-SD devices don't

work with all versions of Gold Cards and Super Gold Cards, this might be an alternative route to getting SD cards for QLs if you have a Super Gold Card, or perhaps for those who are not confident of opening up their QL and removing a Microdrive to make room to install a standard QL-SD. Please bear in mind that a parallel port version of QL-SD might be a little slower than a standard version, of course. You also have to use the higher capacity SD-HC cards rather than the early SD cards.



QL-SD, parallel port prototype, with 8GB SDHC card

MDI Driver

Martin Head has written a device driver for emulating the Microdrive cartridges as used in the Sinclair QL, as a file stored on another device. He wrote it after coming across an old box of Microdrive cartridges of his in a cupboard and deciding to copy and preserve them before they became unusable.

It was specifically developed for use with QPC2, but should work with most emulators. Since QL compatible systems generally have no Microdrives, this lets you use saved Microdrive images on emulators. It includes images of Quill, Archive, Abacus and Easel. To create your own images of Microdrives, you will need a real QL with working Microdrives and read the text file "Creating_Images_txt" supplied to see which program to use and how to go about it. Apparently even Microdrive 'random number' finger prints are copied, allowing even some protected older programs to be run!

The driver lets you ‘mount’ the image files created from your Microdrive cartridges, and use them from an emulator. You can load and save from/to these Microdrive images.

Martin is currently soliciting opinions as to whether a similar floppy disk imaging system might be of interest, now that many users have emulators on computers with no floppy disk drives. No further news on that as yet.

The MDI Driver may be downloaded free from my website at:

<http://www.dilwyn.me.uk/utills/index.html> or from
<http://www16.zippyshare.com/v/68973691/file.html>

The ‘Will Someone Please Make a QL Version’ Of The Month...

Head over to http://www.bitterwallet.com/the-return-of-the-zx-spectrum/71020?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+bitterwallet+%28BitterWallet%29 to see what I’m on about.

Keith Dunbar told me about this – it’s from gaming company Elite – who want to release a Bluetooth version of the iconic Spectrum keyboard which will be compatible with tablets and smartphones. Apparently it’ll include a Spectrum compatible computer mode via an app. The Bluetooth keyboard will apparently retail for under £50. Further details from:

<http://bluetoothzxspectrum.elite-systems.co.uk/>

I ought to point out that Elite have come in for much criticism and controversy in recent years, which I won’t go into here, but you can find out about it on the World of Spectrum forums.

Now all I need is to persuade them to make a QL version, although I suspect that some enterprising Qler might at some point rip out

the innards and put it in a QL case, perhaps! There is of course a DIY project page by Jeroen Janmaat out there at:

[http://
www.deblauweschicht.nl/
tinkering/qlkeys1.html](http://www.deblauweschicht.nl/tinkering/qlkeys1.html)

which shows how to turn a QL keyboard and case into a USB keyboard for a PC, plus on the same site an article

about integrating a RaspberryPi into a QL case (select the “QL Keys 2” link on the left of the page for this).



30 Years Since Announcement...

Urs König wrote:

2nd Thursday in January, what does this say to us?

Right, on that day 30 years ago, the Sinclair QL Professional Computer has been launched. The anniversary date is just days ahead. Let's warm-up for some great stuff to come. Watch this:

http://www.youtube.com/watch?v=zoWq_CxPa3c

New Website As The Entry Point To All “QL Is 30” Activities

2014 is the year of the 30th anniversary of the Sinclair QL Professional Computer, the Mac that never was. The QL is worth remembering. The new website www.qlis30.org.uk hosts or links to any 30th anniversary activities. This website will grow over the next few months so bookmark it and keep on visiting frequently. Share it with friends; post it on social media and your other communication channels. Watch out, there's even more to come. Stay tuned...

New version of “The Final DVD”, now as free download for everyone!

Lucerne, Jan 12th 2014 - COWO Enterprises LLC proudly launches QL is 30 2014 The Distribution. This distribution is the successor to the QL Today 2013 The Final DVD which was sent out in September 2013 with The Final Issue of the QL Today magazine.

The new version 3.00 holds everything which was on the DVD, but has been carefully updated and supplemented with new material - we have been able to add some real gems and an exclusive new release of a formerly commercial package - created or preserved during the last few months.

Altogether there are more than 4.6 GBytes of QL related documents, software and pictures on this distribution.

Preconfigured QL emulators for use under Windows, Mac OS and even Linux make it easy to bring the QL (back) to your desk. QL is 30 2014 The Distribution is free which means it can be downloaded, used and re-distributed by anyone at no cost. As we are in the final stages of production availability is just days ahead.

Order your free download copy using the email address listed in the Feedback section on the brand new "QL is 30" website. In good old Sinclair manner we have to state: Please allow 28 days from receipt of order for delivery.

Latest additions include (state 05.02.2014):

- Very latest versions of the virtual QL machines (aka emulators) QPC2 and SMSQulator and the Operating System SMSQ/E.
- QL INTERACTIVE FANTASY collection

- QL ZEXCEL SPECTRUM EMULATOR collection
- 7 volumes of the QUANTA eMag (Volumes 22 to 28, 2005-2011, 43 issues).
- The SBASIC/SuperBASIC Reference Manual (PDFs and more)
- Plus some real gems (e.g. long lost software) and an exclusive new release (update) of a formerly commercial package, QL forever!



Introduction

- [A brief documentation](#)

Run a virtual QL machine

- [QPC2 v4.0X \(running SMSO/E v3.1X\) on Windows - Files - README](#)
- [SMSOmulator v1.2X \(running SMSO/E v3.1X\) on Java - Files - README](#)

Collections

- [Local \(offline\) copy of Dilwyn Jones' QL website \(as of 20-01-2014\)](#)
- [QL DOCUMENTATION collection v2.07 - README](#)
- [QL EMULATORS collection v1.41 - README - HISTORY](#)
- [QL ON A STICK environment v1.11 - README](#)
- [QL TOOLKITS collection v1.02 - README](#)
- [QL GAMES collection v1.03 - README](#)
- [QL INTERACTIVE FANTASY collection v1.01 - README](#)
- [QL ZEXCEL SPECTRUM EMULATOR collection v1.01 - README](#)
- [QL HISTORY collection, 30th anniversary edition - README](#)
- [QL PICTURE GALLERY collection v3.30 - README](#)
- [QL Today magazine, English, Volumes 1 to 17, 1996-2013 \(PDFs\)](#)
- [QL Today Magazin, Deutsch, Jahrgänge 1 bis 6, 1996-2002 \(PDFs\)](#)
- [QUANTA magazine, English, Volumes 22 to 28, 2005-2011 \(PDFs\)](#)

Bonus Material

- [QL Service Manual \(HTML edition\)](#)
- [The SBASIC/SuperBASIC Reference Manual \(PDFs and more\) - README](#)

Web Links (Online connection required)

- [Dilwyn Jones' comprehensive QL information and PD software website](#)
- [QL vs JAGUAR, Urs König's YouTube channel \(Videos and information about Sinclair, QL, ATARI, JAGUAR, NUON, APPLE & more...\)](#)

Produced 2011-2014 by [Urs König](#) with contributions by many [others](#) - [v3.00](#)

QL Forum Online Chat

Rob Heaton writes:

We are currently trialling a new 'Online Chat' system, this allows our members to communicate in real time and will hopefully add a social side to the Forum!

Once signed into the Forum, you will see a link above, called 'Online Chat' (This sits next to the 'User Control Panel')

You can also connect via an IRC client of your choice, using the following settings;

IRC Server: irc.mibbit.net

Port: 6667

Channel Name: #qlforum

If the Online Chat is a success, we'll look at purchasing the ad-free version, which also allows us to apply the look and feel of the forum to the chat window.

Update: after a few moans about the free ad-supported version, the QL Forum owners purchased the ad-free version and it is now up and running without the annoying popups and adverts (well, unless we go over a rather high number of users at any rate).

Peter Scott ('vanpeebles' on QL Forum) says that there's been an average of about 5 people a night, including some well known QL personalities. It's certainly quickly become a stable fixture of the QL scene.

How To Use The HxC

Rich Mellor has kindly sent me an article showing how to use the HxC floppy disc emulator. The HxC device connects to a standard QL floppy disk interface and allows you to use an SD card to store floppy disk images for use with your QL. The instructions are available



to download as a PDF file from the Replacement Manuals page on my website at <http://www.dilwyn.me.uk/docs/manuals/Sinclair%20QL%20How%20To%20Use%20HxC%20Article.pdf>

RWAP Software

We have been working hard to safeguard the future of the Sinclair QL through creating an online QL Wiki backed by a repository of QL titles.

The QL Wiki enables people to see what software and hardware was produced for the Sinclair QL. The repository enables people to purchase working copies when their microdrive cartridges fail, or they move onto disks or emulators. Where we can, we obtain permission from the copyright holders to re-release items on the market.

This has enabled us to bring some of the titles back to the market as well as re-ignite interest in the Sinclair QL and its emulators.

Old favourites brought back to life include:

E.V.A., Vroom
Black Knight, Double Block
Jungle Eddi, The Lost Pharaoh
Pengi, the Lonely Joker
Microdeal's Flight Simulator, QL Hopper, The King,
Night Nurse and Cuthbert in Space
Mortville Manor, Darkside of the Moon (£10)

We still retain our existing catalogue, including:

Open Golf, Return to Eden,
Stone Raider II, The Prawn,
Hoverzone, Lost Kingdom of Zkul,
Deathstrike, Horrorday,
Flightdeck and QWord

All games are available on disk or for use with Q-emuLator on the PC **from ONLY £5 each**

Microdrive versions also available - from £10 each.
Memory / system limits may apply - please check before ordering.

Visit the QL Wiki for more details on software, books and hardware for the Sinclair QL:

www.rwapadventures.com/ql_wiki

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3 Dale View Court, Fulford, Stoke-on-Trent
Staffordshire ST11 9BA
Tel: 01782 398143
Email: rich@rwapservices.co.uk

Website:
www.rwapsoftware.co.uk or www.sellmyretro.com



Vroom by Pyramide



E.V.A by Westwey



Mortville Manor by Pyramide



Double Block by Francois Lancault



Night Nurse by Microdeal

SMSQmulator and SMSQ/E News

v. 1.23 of SMSQmulator can be downloaded from www.wlenerz.com/SMSQmulator

This uses SMSQE 3.18.

Wolfgang Lenerz says you might want to upgrade, there was bug in the directory creation routine for WIN drives.

SMSQE 3.18 is out www.wlenerz.com/smsqe

This allows programs that are devised for it to have a CSIZE for application subwindows other than 0,0. You can find a demo program for that at www.lenerz.com/QLStuff

Application subwindow text objects may now have character sizes other than 0,0. Of course, this only applies to programs specially written to take advantage of these sizes.

The values for the csizes are stored in the working definition at previously unused locations (\$26 and \$27). The values are the same as those for the CSIZE command i.e. 0 to 3 for the x csize and 0 or 1 for the y csize. Behaviour if other values are given is undefined. Note that the csizes are, of course, the same for all objects of a menu application sub-window (but different appsubwindows may have different csizes).

Wolfgang has given examples of how to use these:

1 - For the machine code programmer :

The values are stored at offsets

wwa_xcsz equ \$26

wwa_ycsz equ \$27

in the working definition, as byte-sized values. The key files have been amended to suit. You may also set these sizes in a menu application sub definition which will be converted to a working definition by the standard setup vector. In that case set the values BELOW the start of the normal definition : at -4 of the start, set a flag, i.e. a long word 'XTND' and at -6 set a word with the x (-6) and y (-5) csizes values as bytes. *Do not forget to adjust the sizes of your objects' hitsize and spacing if you use bigger characters.*

2 - For the basic programmer.

Two procedures have been created for the two common toolkits, qptr and easyptr.

For qptr :

```
def proc set_csizes_QPTR
  (appsub_list,num%,x_csize%,y_csize%)
  rem  set the csizes for menu appsub windows
  rem  params:
  rem  appsub_list
  rem  the appsub list as returned by the RD_AWTA
  basic function and/or
  rem  the MK_AWL extension
  rem  num%
  rem  the appsub number, starting at 1 for the
  first appsub wdw
  rem  x_csize%
  rem  the x csize (0 ... 3), same as for the
  CSIZE command
  rem  y_csize%
```

```

rem    the y csize (0 or 1), same as for the CSIZE
command
rem
rem    If there is any error in the parameters,
rem    this just gives up silently
rem    without generating an error
rem
local appsub_nbr%,appsub
    appsub_nbr%=peek_w(appsub_list) : rem nbr of
appsub wdws
    if appsub_nbr% < num% or num% < 1:
return      : rem wrong appsub number
    appsub=peek_l(appsub_list+2+4*(num%-1)) : rem
get pointer to appsub wdw
    if x_csize% > -1 and x_csize% < 4
        poke appsub+38,x_csize% : rem set size
    endif
    if y_csize% > -1 and y_csize% < 2
        poke appsub+39,y_csize% : rem set size
    endif
end def set_csizes_QPTR

```

Call this procedure once you have created the appsub list.

For easyptr:

```

def proc set_csizes_EASYPTR
(channel%,num%,x_csize%,y_csize%)

```

```

rem    set the csizes for menu appsub windows
rem    params:
rem    channel%
rem    the channel number, which must be the same
rem    one as used for MAWDRAW
rem    or MAWSETUP. THIS DOES NOT DEFAULT TO
rem    ANYTHING, you MUST
rem    supply this parameter correctly.
rem    num%
rem    the appsub number, starting at 1 for
rem    the first appsub wdw
rem    x_csize%
rem    the x csize (0 ... 3), same as f
rem    or the CSIZE command
rem    y_csize%
rem    the y csize (0 or 1), same as for
rem    the CSIZE command
rem
rem    If there is any error in the parameters,
rem    this just gives up silently
rem    without generating an error
rem
local appsub_nbr%,appsub
    appsub= MWDE(#channel%)    : rem the working
definition
    appsub_nbr%=peek_w
(appsub+110)                    : rem nbr of appsub
wdws

```

```

    if appsub_nbr% < num% or num% < 1:
return      : rem wrong appsub number
    appsub=peek_1(appsub+112): rem point to appsub
list
    appsub=peek_1(appsub+4*(num%-1)) : rem get
pointer to
appsub wdw
    if x_csize% > -1 and x_csize% < 4
        poke appsub+38,x_csize% : rem set size
    endif
    if y_csize% > -1 and y_csize% < 2
        poke appsub+39,y_csize%  : rem set size
    endif
end def set_csizes_EASYPTR

```

For this to work, create your menu with the MAWSETUP command and call this procedure afterwards. You will find both procedures in a common file : dev8_extras_source_setcsizes_bas.

Do not forget to adjust the sizes of your objects' hitsize and spacing if you use bigger characters.

TURBO UPDATE PART 3

GEORGE GWILT

New Features

I have already described the various corrections and enhancements which have been made to TURBO in the last thirteen years. Now we come to the new features which have been added in that period.

These are:

JOCHEN MERZ SOFTWARE

**Kaiser-Wilhelm-Str. 302
47169 Duisburg, Germany**

**Fax +49 203 502012
EMail: SMSQ@J-M-S.com**

SMSQ.J-M-S.COM

**Thanks to Marcel, QPC2 is now freely available.
You can download it from Marcells homepage**

www.Kilgus.net

If you wish to print from QPC2, then you need

QPCPrint

... which is available from J-M-S.

Only 39.90 if you choose EMail delivery.

For additional 4 EUR, delivery will be on CD.

QPCPrint will allow you to print to (more or less) every printer which is installed under Windows (dot matrix, ink, laser, PDF "printer", FAX "printer" etc.)

You can place your order via letter or use the SSL order form on SMSQ.J-M-S.COM - click on "Online orders".

If you order by Mail or through the SSL contact form: We now accept VISA, MasterCard, Diners Club, JCB, Discover, UnionPay, BCard, DinaCard and American Express!

The order form has not been updated for the new card types at the time I write this ad, but it will be updated soon.

I am still working on changing the forms and implementing SEPA on all the order forms.

1. DEBUG and DEBUG_LEVEL
2. TURBO_V
3. Inclusion of files extending S*BASIC
4. Passing parameters of machine code extensions by reference
5. Adding Config Blocks to compiled programs

DEBUG and DEBUG_LEVEL

These directives are intended to allow selective compilation.

DEBUG_LEVEL k,

k ranging from 0 to 9, sets the level above which no compilation occurs. Thus all instructions after DEBUG j are ignored if j is greater than k. If the directive DEBUG_LEVEL is not issued the level is taken to be 0. This means that a set of instructions can be ignored by TURBO if they lie between DEBUG 1, which turns off compilation, and DEBUG 0, which turns it on again. I have found this the most useful aspect of these directives.

TURBO_V

Inside a program compiled by TURBO there is an area called a Vector Table. Each entry in this table is four bytes long. For each name used in the program there is one entry. For names belonging to integer or floating point variables the entry is the address of the two or six byte area holding the value of the variable. For arrays, including simple strings, the entry points to a descriptor which contains information about the size and number of dimensions. If the name is that of a machine code routine, the entry points to the absolute address of the code implementing that routine.

TURBO_V is a function requiring a single name as a parameter. It returns the absolute address of the four-byte entry corresponding to the name in the Vector Table. Thus, for example, the value of v% could be obtained by

PEEK_W(PEEK_L(TURBO_V(v%)))

This would be a rather silly use of TURBO_V since v% would give the same answer!

The best use of TURBO_V is probably to solve the following problem. Suppose that a procedure TYCK might or might not be loaded when the program is run.

If it is loaded TYCK can be used, but if not an alternative routine must be used.

The line

```
3000 IF BASIC_INDEX%("TYCK") > 0 : TYCK : ELSE :  
Alt_Tyck
```

will not work if TYCK is not loaded at run time.

The trouble is the instruction

TYCK

This will cause the program to be aborted if TYCK is not there. This is because the name "TYCK", being used in that instruction, will have had a place set for it in the Vector Table but TURBO will not have been able to fill in the address of its code.

The solution is to use another name, which is guaranteed to exist, in place of TYCK and, if TYCK is loaded, to put its code's address in the place in the Vector Table corresponding to that other name.

The names TURBO_DUMMYP, TURBO_DUMMY%, TURBO_DUMMYF and TURBO_DUMMY\$ are provided in Turbo TK code as substitutes for names of procedures, integers, functions and

strings. Thus TURBO_DUMMYP can be substituted for TYCK by using TURBO_V to find the machine code address of TYCK and by pushing it into the Vector Table's entry for the name TURBO_DUMMYP.

Towards the start of the program you would set

```
1000 ads = BASIC_ADR(BASIC_INDEX%("TYCK"))
1010 IF ads <> 0 : POKE_L TURBO_V(TURBO_DUMMYP),ads
The instruction at 3000 would now be
```

```
3000 IF BASIC_INDEX%("TYCK") > 0: TURBO_DUMMYP :
ELSE : Alt_Tyck
```

This will work whether or not TYCK is loaded at run time. There will be no error signalled if TYCK is not loaded because TYCK was never used as a name in the program.

Notes:

BASIC_INDEX%("a") returns the number of the entry in the Name Table of "a" or -12 if "a" is not loaded.

BASIC_ADR(n%) returns the absolute address of the code for the n%th entry in the Name Table, or 0 if the entry is out of range.

Extensions

It is necessary to have the code available for any extensions used in a compiled program. The obvious way of achieving this is to load any required extensions before running the compiled program. In cases where a program is to be used by someone who does not have the extension file to load it is more than an annoyance. QLIB have the

facility to store such extensions in the compiled program. This facility has also been added to TURBO.

Inclusion of win1_prog1, for example, is done by the line

```
REMark %%win1_prog1,a,b
```

Where "a" is the offset to the initialisation code, or 0 "b" is the offset to the definitions

Thus

```
REMark %%win1_turbo_rem_code,6,10
```

would include all the Turbo TK code extensions needed in a compiled program.

Extension Parameters

Originally TURBO passed all parameters to machine code routines by value.

This, of course, meant that TURBO could not deal properly with any extension which altered its parameters. At the time GET, part of TK2, was the only common extra keyword which did this. Since Turbo TK's keywords GET%, GET\$ and GETF were available it was thought that the inability to compile GET would not be a problem since it could be replaced in the program by one of the other three.

The restriction to passing parameters only by value prevented the compilation of all extensions which had arrays as parameters. Again, there seemed to be no need at the time to allow for this, since no existing, commonly used, extension had arrays as parameters.

Then along came QPTR. This was bursting with routines which had many array parameters. Because programs using QPTR could not be compiled by TURBO Mark Knight persuaded me to produce TurboPTR which was to be similar to EasyPTR but capable of being compiled by TURBO.

Later on I decided to alter TURBO to pass parameters to machine code extensions by reference and to allow array parameters. This was successful apart from simple string parameters for the original QDOS roms such as JS.

For some reason the code stored such strings in SuperBASIC's variables area which is not replicated by TURBO. The use of the variables area in this code was unnecessary and indeed does not reappear in SMSQ/E so that TURBO will happily compile extensions with string parameters if SMSQ/E is used. To allow this the command TURBO_ref must be issued in the program to be compiled.

Config Blocks

The program uconfig, available from Dilwyn's website under the TURBO heading, allows the production of config blocks. The letter "u" in uconfig, stands for universal. This is because every time the program is run output occurs for the three types of program; assembler, C and S*BASIC.

The output for S*BASIC consists of two files. One of these is to be merged into the program to be compiled. The second of these, which has a name ending in _INS, is the config block which has to be set into the compiled program.

This is done by including the _INS file in the S*BASIC program as though it were an extension file but with parameters 0 and 1. For example the inclusion might be:

GEODESIQUES BAS

STEVE POOLE

In 1988, the excellent French magazine 'Science & Vie Micro' published a program for readers to adapt to any type of computer. This one was written by Frederic Neuville, a very talented and prolific author, and is a very good example of tight Basic Coding.

It calculates the trajectory of a kind of curve called 'geodesic'. Einstein postulated that Space-Time was curved and that masses travelled not in straight lines but following geodesic curves...the shortest routes!

This program can adopt different surfaces, initially a tore, (Or sphere, conoide de plücker or $SIN(R)/R$, if you adapt SUB 1000).

In General, a surface is defined as a vectorial function $F_n(u,v)$, with three function coordinates $x(u,v)$, $y(u,v)$, $z(u,v)$, where x,y,z are point coordinates. (For a sphere, u & v are longitude and latitude). We can determine the tangent plane to each point. For those that want the mathematical description of how, please contact the editor for a copy of the program notes, which give the vector formulae! The plane is swept out by the line perpendicular to the radius, giving us the required 3D vector. The direction angles of the vector allow us to eliminate hidden vectors.

Examples of surface equations :

```

Hellicoides : x=v*COS(u) : y=v*SIN(u) : z=25+u
with -PI < u < PI & 0< v <100

Hyperbolic paraboloid : x=10*u : y=10*v :
z=u*v

with -5 < u < 5 & -5 < v < 5

Conoide de Plùcker : x=200*u : y=200*v
: z= 50*((u*u-v*v)/(u*u+v*v))

with -.5 < v < .5

```

(For these you need to adapt SUB 1000)

We assume the orbiter slides without friction on a surface following a vectorised trajectory. Apart from spheres, there are no mathematical calculations for curved surfaces. This program calculates by approximation using differential equations for a toroid. From u & v we calculate the vector speeds using the Euler method. The Runge-Kutta method is better, but much slower. A_u & A_v are the vector accelerations. This results in a system of two equations with two unknowns A_u & A_v solved by the method of Cramer iterations. And that's it...Phew!

To change surface, modify the initialisation line $Du=(U_m-U_i)$ etc. (In the original listing, this line contains nasty typos)... The original listing can be obtained from the Editor. It is in standard PC Basic. Line 158 PSET is POINT. LINE 180 END is STOP.

I Rewrote the GO SUB sections in SuperBASIC, so as to be able to modify the initialisation parameters, renumber the program, whilst still retaining the GOSUB line numbers in the original code. Otherwise I retained the full code as is.

The Editor (that's me ed.) has three versions. The first, 'Geode', gives output as in the original program, the other two using random initialisation to show a wider range of output. It is Geode which is published, the others will be in the QUANTA Library.

The output is, as mentioned, approximate, so the geodesics end up going haywire as internal errors accumulate, and finish by reversing direction! I had to trap divisions by zero, replacing zero with infinitesimal values...If you increase the number of iterations, the program ends up passing odd values to the trig functions, which cannot handle them, and therefore they fall over.

To eliminate approximation , try using the more accurate Runga Kutta method, but this would mean substantial code changes...but would be a good project for an ambitious programmer.

```
100 ::
```

```
110 REMark GEODESIQUES_BAS
```

```
120 CLEAR: WINDOW 512,256,0,0: SCALE 256,64,0:
```

```
CLS
```

```
130 LX=512: LY=256: Q='.000000001': PP=SQRT(3)/2
```

```

140 U1=0: UM=6.283184: UM=2*PI: V1=0: VM=UM
150 DU=(UM-U1)/1000: DV=(VM-V1)/1000: IF DV=0:
DV=Q
160 IF DU=0: DU=Q
170 REMark INPUT 'LONG U'!U$, 'LAT V'!V$: U=U$:
V=V$: REMark U=30: V=30
180 U=RND(30): V=RND(30): INK 0: U=0: V=0
190 SUB_1000: SUB_1100
200 XX=XP: YY=YP
210 REMark INPUT 'VELOCITY TU'!TU$, ' & TV'!TV$:
TU=TU$: TV=TV$: REMark TU=.1: TV=.1
220 TU=RND(9): TV=RND(1): TU=0: TV=.1
230 IF TU=0 AND TV=0: GO TO 210
240 SUB_1200
250 MV=SQRT(UX*UX+UY*UY+UZ*UZ)*TU+SQRT
(VX*VX+VY*VY+VZ*VZ)*TV
260 IF MV=0: MV=Q: END IF : DT=2/MV
270 CLS: SUB_2000: PRINT U,V,TU,TV
280 INK 7
290 :

```

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```

300 FOR I=1 TO 5000

310 SUB_1500: SUB_1700

320 U=U+DT*TU: V=V+DT*TV

330 TU=TU+DT*GU: TV=TV+DT*GV

340 SUB_1000: SUB_1100: SUB_1200

350 N= (UY*VZ-UZ*VY) + (UZ*VX-UX*VZ) + (UX*VY-UY*VX)

360 IF N<0: POINT XP,YP: GO TO 380

370 LINE XX,YY TO XP,YP

380 XX=XP: YY=YP: REMark PAUSE 1

390 END FOR I: BEEP 12345,6: PAUSE 128: GO TO 100

400 ::

410 DEFine PROCedure SUB_1000

415 REMark SURFACE

420 R1=80: R2=40

430 X=COS (U) * (R1+R2*COS (V))

440 Y=SIN (U) * (R1+R2*COS (V))

450 Z=R2*SIN (V)

460 END DEFine

470 :

480 DEFine PROCedure SUB_1100

```

490 $XP=LX/2+(Y-X)*PP$

500 $YP=(LY+X+Y)/2-Z$

510 END DEFine

520 :

530 DEFine PROCedure SUB_1200

540 US=U: VS=V: SUB_1000: XO=X: YO=Y: ZO=Z

550 U=U+DU: SUB_1000: X1=X: Y1=Y: Z1=Z

560 U=US: V=V+DV: SUB_1000

570 $UX=(X1-XO)/DU$: $VX=(X-XO)/DV$

580 $UY=(Y1-YO)/DU$: $VY=(Y-YO)/DV$

590 $UZ=(Z1-ZO)/DU$: $VZ=(Z-ZO)/DV$

600 V=VS

610 END DEFine

620 :

630 DEFine PROCedure SUB_1500

640 UO=U: VO=V: SUB_1200

650 U1=UX: U2=UY: U3=UZ

660 V1=VX: V2=VY: V3=VZ

670 U=U+DU: SUB_1200

680 $EX_=(UX-U1)/DU$: $FX=(VX-V1)/DU$

```

690 EY_=(UY-U2)/DU: FY=(VY-V2)/DU
700 EZ_=(UZ-U3)/DU: FZ=(VZ-V3)/DU
710 U=UO: V=VO+DV: SUB_1200
720 GX=(VX-V1)/DV
730 GY=(VY-V2)/DV
740 GZ=(VZ-V3)/DV
750 V=VO: SUB_1200
760 END DEFine
770 :
780 DEFine PROCedure SUB_1700
790 UU=UX*UX+UY*UY+UZ*UZ
800 IF UU=0: UU=Q: I$='--'(RND(1 TO 2)):
I$=I$&'1': II=I$: UU=Q*II
810 UV=UX*VX+UY*VY+UZ*VZ: IF UV=0: UV=Q
820 IF UV=0: UV=Q: I$='--'(RND(1 TO 2)):
I$=I$&'1': II=I$: UV=Q*II
830 VV=VX*VX+VY*VY+VZ*VZ: IF VV=0: VV=Q
840 IF VV=0: VV=Q: I$='--'(RND(1 TO 2)):
I$=I$&'1': II=I$: VV=Q*II
850 UE=UX*EX_+UY*EY_+UZ*EZ_

```

```

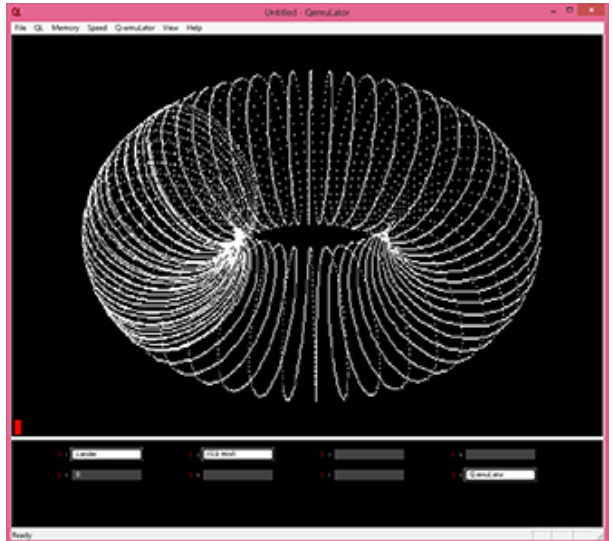
860 UF=UX*FX+UY*FY+UZ*FZ
870 UG=UX*GX+UY*GY+UZ*GZ
880 VE=VX*EX_  +VY*EY_  +VZ*EZ_  
890 VF=VX*FX+VY*FY+VZ*FZ
900 VG=VX*GX+VY*GY+VZ*GZ
910 CU=- (TU*TU*UE+2*TU*TV*UF+TV*TV*UG)
920 CV=- (TU*TU*VE+2*TU*TV*VF+TV*TV*VG)
930 GGU=UU*VV-UV*UV
940 IF GGU=0: GGU=Q: I$='-+' (RND(1 TO
2)):I$=I$&'1':II=I$: GGU=Q*II
950 GU=(CU*VV-CV*UV)/GGU
960 GGV=UU*VV-UV*UV
970 IF GGV=0: GGV=Q: I$='-+' (RND(1 TO
2)):I$=I$&'1':II=I$: GGV=Q*II
980 GV=(UU*CV-UV*CU)/GGV
990 END DEFine
1000 :
1010 DEFine PROCedure SUB_2000
1020 UU=U: VV=V: KU=80: KV=40
1025 UDIV=(UM-U1)/KU: VDIV=(VM-V1)/KV

```

```

1030 FOR U=U1 TO UM STEP UDIV
1040 FOR V=V1 TO VM STEP VDIV
1050 SUB_1200
1060 N=(UY*VZ-UZ*VY)+(UZ*VX-UX*VZ)+(UX*VY-UY*VX)
1070 IF N<0: GO TO 1100
1080 SUB_1000:
SUB_1100
1090 POINT XP,YP
1100 END FOR V
1110 END FOR U
1120 U=UU: V=VV
1130 END DEFine

```



CHAIRMAN'S NOTES

SARAH GILPIN

QUANTA is looking forward to hosting the first Annual General Meeting using teleconferencing and Skype as well as welcoming those that wish to attend in person. QUANTA members are spread worldwide so remote access to the meeting will allow more of us to participate. The A.G.M. booklet contains proxy forms for those that are unable to attend by any of the offered methods. Instructions on how to join us are given on page 19 of the A.G.M. booklet. We have one new nomination for Committee from Dave Park, which will make the Committee

international for the first time in many years.

As we have done in previous years when the A.G.M has been held in Manchester, NEMQLUG will hold their annual Chinese Banquet at the Pond Quay on Saturday 26th April. NEMQLUG extends the invitation to any QUANTA members that would like to join them.

There has been much discussion on the possibility of “An Event” to celebrate QL is 30. Dave Park has initiated a “QL is 30 pledge” and QUANTA have agreed to match the pledge to a limit of £500. Now it is a question of the chicken and the egg – is a venue and date required before the programme of the day (or weekend) is looked at or the other way round. We have received a possible town for such an event provided a suitable venue can be found. Geoff Wicks has said on the QI-Users list that he has a number of ideas for the programme. We look forward to further information on these ideas.

Progress has been made in getting the Library onto the QUANTA Website with the Library guide available to members and non-members alike. The next step is making older versions of the QUANTA Magazine available in a similar manner, and that is currently a “work in progress”

I am pleased to say that QUANTA is moving towards adopting the 21st Century methods of communication. The Committee meeting on 2nd February was attended remotely by Lee Privett and Dilwyn Jones using both the teleconferencing number and Skype, with the rest of the Committee attending in person. This was a training run for us all for the Annual General Meeting in April. The Committee have agreed the purchase of a Teleconferencing speaker-phone.

Members wishing to submit helpline requests via email can use the email address helpline@quanta.org.uk or if you prefer to use traditional post, please send the helpline request to me via the address printed inside the front cover of the Magazine.

Obviously, we cannot guarantee to answer every query we receive, but we will do our best! Where we have been unable to answer the queries, we may print the help request as an open request in the magazine to ask if any of the readers can come up with a solution. And, of course, if readers feel that they have a better solution than we came up with, or would like to correct any errors we make, please write to us!

Quanta Library Online

Now that the new website has settled down, we are able to offer the entire Quanta software library CD and Library Guide online. Both can be downloaded from the Quanta website at <http://www.quanta.org.uk> – click on the “SOFTWARE LIBRARY” link (ringed in the screen dump in Figure 1) at the top of the page, or go direct to the software library page at <https://quanta.org.uk/software-library/>

I thought that as this is a fairly new development, I'd dedicate a Helpline column to the subject, to encourage members to download and use the Library.

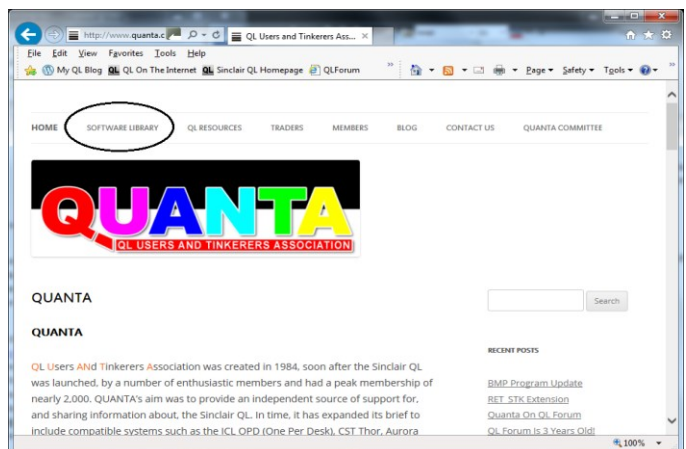


Figure 1 – accessing the Library page on Quanta website

The Library Guide

The Library Guide is a zipped up version of the lib-guide on floppy disk LG01. To download it just scroll down to the Library Guide section on the page, locate the download icon, a green down-arrow with the word Download beside it and click on it. See Figure 2. The exact action which follows depends on which browser you use. For this article I will be assuming Internet Explorer. It may look different in all browsers, even if it works in a similar manner in principle. All examples assume the Windows operating system, I will not even dare to try to offer advice for Linux or Apple systems.

The browser offers to download the zip file and asks if you want to Open, Save, or Cancel. See Figure 3. To the right of the Save button there is a down arrow – click on this and you get a further little menu with Save, Save As and Save And Open as options. I normally use

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Website:
www.rwapsoftware.co.uk or www.sellmyretro.com



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Save As since it lets me save to a folder of my choice and if I need to, with a different filename to that offered by the website.

Figure 2 – Download link for the Library Guide

The filename will end with 'libguide.zip' by default but you can easily change that.

Some browsers will save the file straight into their default downloads folder. In this case, you'll have to find it as appropriate to your system setup. Keep the length of the filename fairly short to enable it to work with the fairly restricted maximum QL path name limit of 36 characters.

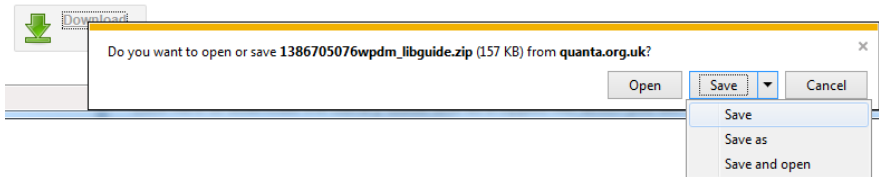
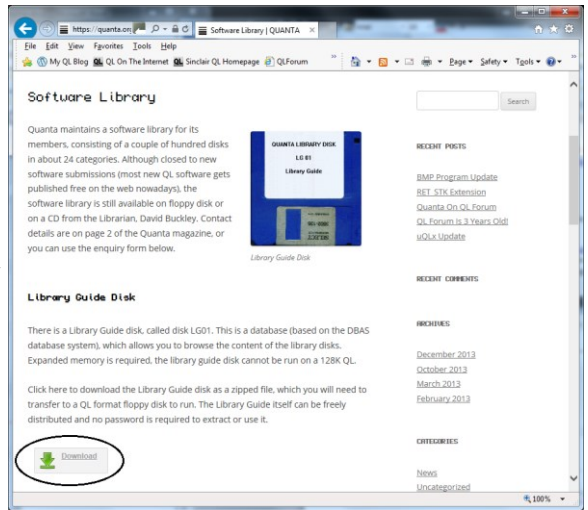


Figure 3 – Download save options in Internet Explorer

Once you've found it, or made a note of where you saved it, you will now need to transfer it to your QL or emulator. The exact method is dependent on the exact system used. There are too many of them to even think of going into the subject of file transfers here - every single QL system seems to need a separate set of instructions these days! A useful source of information on file transfers may be found on my website at <http://www.dilwyn.me.uk/gen/pcqlxfer/index.html>

IMPORTANT: Do not try to unzip the downloaded file in Windows or other operating systems. It never works, QL file headers get lost or damaged, anything you try later to execute on a QL just gives Bad

Parameter errors due to the loss of file headers and expert help would be needed to restore normality. ALWAYS transfer the zip file to a QL or QL emulator first and unzip it on there. File transfer may take one of several forms, you will need to look up which is most appropriate for your system:

Put the zip file on a DOS or Windows formatted floppy disk and use QL software such as Discover, Mtools or MultiDos on a QDOS or SMSQ/E system to read and transfer the software into the QL environment. These can be downloaded from <http://www.dilwyn.me.uk/files/index.html> and <http://www.dilwyn.me.uk/filetran/index.html>

QPC2 users can access DOS or Windows formatted floppy disks directly, and QPC2 and SMSQmulator users can access DOS/Windows hard disks directly using the DOS device on QPC2 or the native directory device on SMSQmulator (as long as the path name – folder plus filename length – does not exceed the QL filename length limits). Use Windows or DOS software such as WXQT2 (www.daria.co.uk/qdos/) or QL Disk Reader (<http://www.dilwyn.me.uk/filetran/index.html>) to move files between the QL and PC environments, depending on the type of media you want to use. If the QL has no floppy disk drives, you may need to consider using a serial cable link between the PC and QL to transfer the files. See <http://www.dilwyn.me.uk/gen/serial/serial.html> and <http://oldmachinery.blogspot.co.uk/2014/01/sinclair-ql-serial.html> for articles on this subject.

Having transferred the zip file to a QDOS or SMSQ/E environment you will then need to unzip it. For this we must use a QDOS version of Unzip, which you can get from www.daria.co.uk/qdos/ or <http://www.dilwyn.me.uk/arch/index.html>. If you haven't already got a copy of Unzip, you may find yourself in the situation where you need to download a zipped copy of unzip for which you will need a copy of Unzip to unzip your copy of unzip.

To get around this, go to <http://www.dilwyn.me.uk/arch/index.html> and look at the Job2Bas utility, where you can download a copy of Unzip saved as a BASIC file which will survive Windows to QL transfer and when run on a QL will “create” a temporary copy of Unzip. This will help you access zipped download files initially, until you can get the full zip and unzip packages for your QL. There is something called a “self-extracting archive” of unzip which ought to solve the problem at a stroke, but sadly it’s quite an old program which doesn’t always work on all systems.

QemuLator users have an extra option – you can attach the zip file directly to one of the emulator’s 8 drive slots – right click on a spare drive slot and choose the “Zip/QLPAK Archive...” option and navigate to the location where you stored the downloaded zip file and attach the zip file to that slot. Let’s say it was slot 3. DIR MDV3_ or DIR FLP3_ should now give a list of files which you can copy to wherever you want them stored.

General information on using Unzip and Zip may be found on my website at <http://www.dilwyn.me.uk/gen/pcqplxfer/index.html> (scroll down that page to the section on Unzip). There are also articles about using Zip and Unzip at <http://www.dilwyn.me.uk/docs/articles/index.html>

The Library Guide as supplied is designed to run from floppy disk FLP1_. To use it from another device such as hard disk, you need to read the documentation to see how to adapt it. As long as your QL or emulator has access to a floppy disk, use that first, it will prove easiest. If not, unzip all the files to a folder on your QL hard disk and read the _doc files supplied. If your system has a device driver called DEV (many disk interfaces from Miracle Systems Ltd and some emulators such as QPC do have this) there is a little trick you can use to fool the system to run software configured for floppy disk from a directory on a hard disk system. Let us suppose that you’ve put the

Library Guide into a directory called WIN1_LIBGUIDE_ on the hard disk. Point the DEV device driver's devices 1 and 2 to the directory as follows:

```
DEV_USE 1,WIN1_LIBGUIDE_  
DEV_USE 2,WIN1_LIBGUIDE_
```

DIR DEV1_ now shows a list of files from the Library Guide. Now rename the DEV device to have a name of FLP instead of DEV.

```
DEV_USE "FLP"
```

This "steals" the FLP device name from the floppy disks and gives it to the DEV device. DIR FLP1_ now gives a list of files on the Library Guide directory. You can no longer use the floppy disk drives, although you can give them a new name with FLP_USE like this:

```
FLP_USE "flo"
```

After which, DIR FLO1_ gives a list of files on the original floppy disk drive (well, as long as it contains a floppy disk). To restore normality later, use the two commands:

```
DEV_USE DEV  
FLP_USE FLP
```

Assuming you have successfully got this far, you can now run the Library Guide software to see what's in our software library. Just LRUN the BOOT program from the disk:

```
LRUN FLP1_BOOT
```

This will load the DBAS database extensions which are needed to run the Library Guide program. If already installed on your system, just

REM out the three lines which contain the RESPR, LBYTES and CALL statements (1095,1100 and 1105 on my copy, it may vary from version to version). The device name from which everything is loaded is set in an earlier line of the BOOT program, containing code such as device\$="FLP1_" – see the listing in Figure 4.

```
1030 REMark *-----*
1035 REMark * This program is for Members' use only *
1040 REMark * as it does NOT allow                *
1045 REMark * changes to be made to the database.  *
1050 REMark *-----*
1055 REMark * PS. Don't forget to send the disk    *
1060 REMark * to the Librarian for regular updates *
1065 REMark *-----*
1070 :
1075 REMark Change the next line to suit your system
1080 device$ = 'flp1_'
1085 :
1090 REMark The next three lines need to be done only ONCE
1095 addr = RESPR(11558)
1100 LBYTES device$ & 'data_bin', addr
1105 CALL addr
1110 :
1115 REMark The next line can be called as many times as you like
1120 EXEC device$ & 'libguide_exe'

ed
```

Figure 4 - The BOOT program from the Library Guide.

Running the BOOT program should bring up a green window, the introductory screen of the Library Guide program, written by Norman Dunbar. See Figure 5. It first asks you to specify which device it's running from, which will be FLP1_ by default (this is why I suggested the use of the DEV device trick in the tip above). You can change it to something like WIN1_LIBGUIDE_ or wherever you stored the unzipped Library Guide.

```
LIBGUIDE

Converted by Norman Dunbar

The original ARCHIVE version was written by R. Horton & R. Sherratt, L. Davies
also had a hand in it somewhere along the line !

SELECT DEVICES
=====
Activate this cursor with CTRL-C ↓
Which device is 'libguide_dbs' on : flp1_
Which printer device (delete default for no printer) :
```

Figure 5 – Opening screen of Library Guide

It also asks for the printer device name. If you are unsure, leave this blank. You may find that if you specify an incorrect name here, the program gives an error and just stops. All being well, you should have the screen shown in Figure 6. And look who's name is on the first program listed in the Library. Clue: who is the Editor of Quanta magazine? From here, you should be able to browse the Library Guide just by following the list of commands at the bottom, e.g. press N for Next to step forward to the next entry, or B for Back to go back one. Happy browsing – it may take a while, there are almost 800 entries in the database!

```

RECORD      : 1 of 794 [ UNSORTED ]
DISC NAME   : CD 01
TITLE      : CAD
CATEGORY    : C.A.D.
SUBMITTED   : 87/08
AUTHOR     : PRIVETT .L
REVISED    :

One of the best CAD's we have, & just about the easiest to use. Design your
circuit diagrams with this, auto-drawing of most components I/C's,
terminals, resistors, etc. plus all the normal save, load & printer dump
facilities. Associated files : Cad_exts, Cad_exe, Cad_font, Cad_scr,
Cad1_doc, Cad2_doc, Dump_install_bas, Dump_code, Cad_clone,
Cad_boot.

J-Back_10  B-Back  F-First  G-Goto  O-Order  R-Reset  Q-Quit  T-Locate
K-Next_10  N-Next  L-Last   Z-Scan  P-Print  S-Select  I-Find  C-Continue
Press F1 for HELP, F4 to refresh screen or select a menu option

```

Figure 6 – The Library Guide, first entry in the database

The Library CD

Downloading the CD itself is a rather bigger task, but not too difficult once you've mastered the Library Guide. Actually, although I refer to it as the Library CD, it is not actually a CD image or anything like that, it's simply a copy of the files on the original Library CD which have been zipped up and can be run from hard disk. Be warned, it is a VERY large file at about 50MB in size even when zipped.

To download it, simply go further down the Library page and locate the green arrow and Download button below the Quanta Library CD Download heading (see Figure 7). Click on it and save it as before to your hard disk on the PC.

The Library is meant to be for use by members only. Many authors gave their permission for the software to be made available for use by members only, not for non-members. We are no longer in touch with many of these authors, so are unable to make the entire library publicly available. Accordingly, we have had to make it password protected and the password will be changed from time to time to maintain security at a reasonable level. Members can apply to the Librarian (currently David Buckley) for the password required to Unzip the Library once downloaded. David's contact details are inside the front cover of the magazine, and there is a message form on the bottom of the Software Library page on the website.

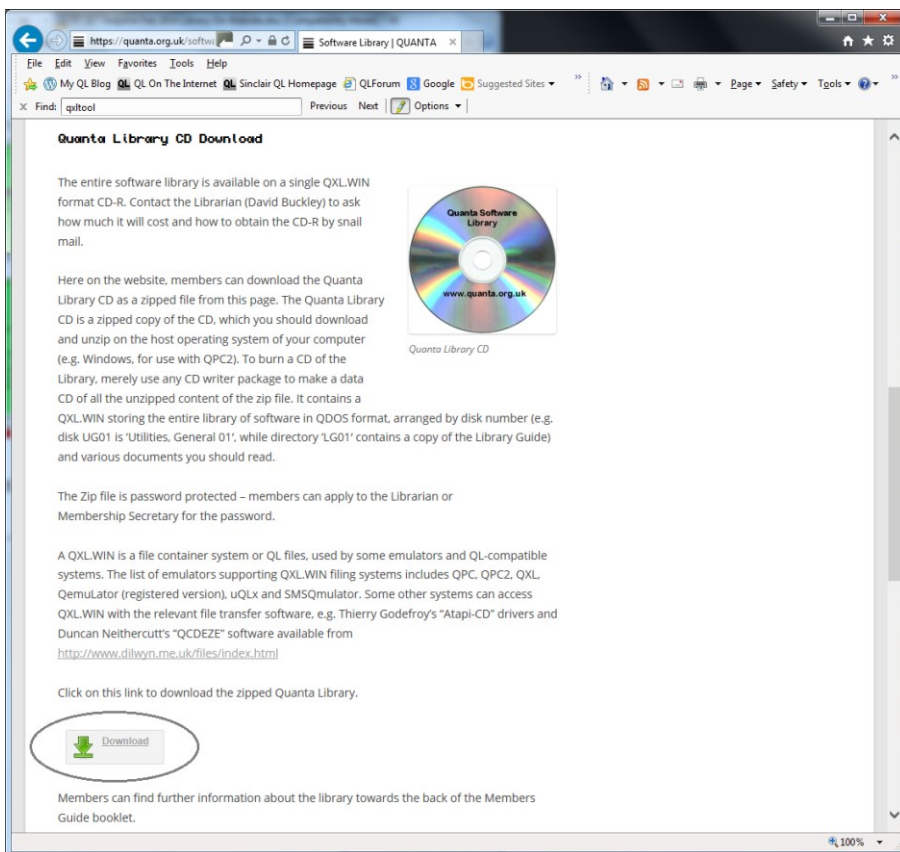


Figure 7 – Downloading the Library CD

This copy of the Library is in what is known as a QXL.WIN format. A QXL.WIN is a QDOS/SMSQ file container format. In other words, a QXL.WIN is a single massive Windows file, which contains all the QL files inside it. QXL.WIN containers can be read directly on emulators such as QPC2, SMSQmulator, uQLx, QXL and the registered version of QemuLator. Some other systems such as Qubide, Q40 and Q60 can indirectly read a QXL.WIN using software such as QCDEZE from Duncan Neithercutt or QXLWIN from Wolfgang Lenerz, and some may require the Atapi-IDE extensions of Thierry Godefroy, all available from my website at <http://www.dilwyn.me.uk/files/index.html> . Another option is to use software such as Jonathan Hudson's QXLTool to read and transfer individual files – get that from <http://www.daria.co.uk/qdos/> , I think it's available in QDOS, DOS/Windows and Unix/Linux versions, although I don't know how many of these versions still work on modern systems.

If you want to make a CD out of it, just copy all the files to CD using your CD burning software – just make a standard data CD out of it. As long as your emulator can see the QXL.WIN at the end of the day.

Assuming your system can read a QXL.WIN directly, you may have attached it to WIN drive slot 3 for example. In this case, DIR WIN3_ will give a list of folders and files (a folder is simply the Windows term for what we on the QL call a directory). If you want to see what's on disk ML01, simply DIR WIN3_ML01_ . And so on.

The QXL.WIN contains individual Library disks categorised mostly by 4-character names. For example, disk or directory number LG01 contains the Library Guide mentioned above. ML01 contains some magazine listings from past issues of Quanta magazine, such as those from Steve Poole's long running series of articles. GG01 contains general games. And so on.

There is a list of these categories in the file called GUIDE_DOC within the Library Guide. Have a look – you may be surprised how much there is! For those who would rather not download the entire Library for whatever reason (e.g. members who do not have broadband for whom a 50MB download would be far too long) the Library CD or even individual disks are still available direct from the Librarian by post – details will be in the new Members Guide circulated to members this year, or of course you can contact the Librarian directly to get an idea of how to go about it and what postage costs to your country might be.

The individual disks of the Library will remain available, as long as the disks remain readable. In theory the copies on the Library CD have the same content, but over the years the various Librarians have split some disks into individual program sub-directories, so some work might be required to recover individual disks, please contact the Librarian first to ascertain availability of a particular disk if ordering individual disks.

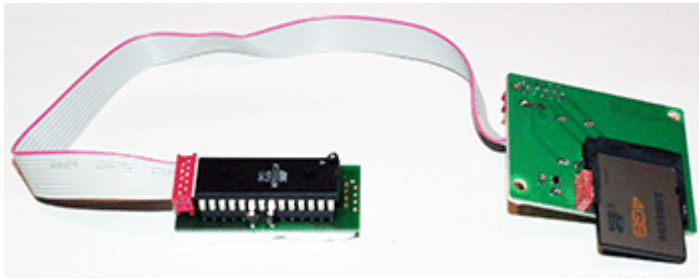
QL-SD

LEE PRIVETT

After much wishful thinking during the past few years, a new hardware device appeared, the first in fact, before a production of a few more appears on the horizon.

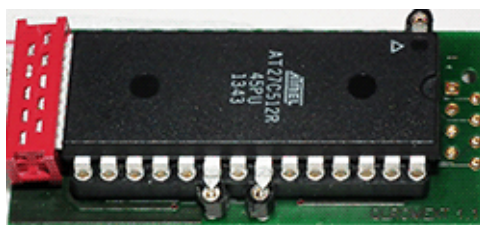
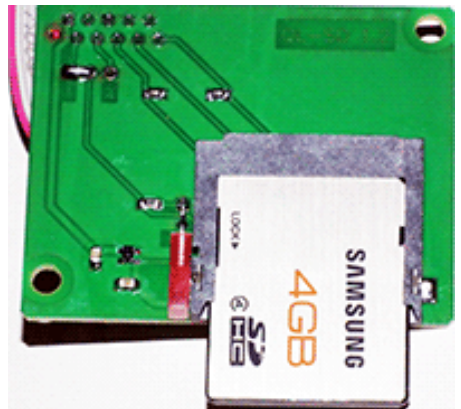
An SD card based storage device for the original QL, that fits in the QL itself. This means some work undoing the QL case and fitting the device inside.

A picture on the next page is the complete unit as delivered, mine came with a signed Certificate, I cannot say this will occur for everyone.



Made up of three component parts, the board holding the SD card, a board holding the EPROM and the ribbon cable connecting the two. There appears to be very little else that can be seen other than some surface mounted discrete components and an LED alongside the SD card socket.

The EPROM board does appear to have components underneath the EPROM socket but this is difficult to see. That's about it really, based on what we've seen so far the QL-SD card is very neat device, it would appear that fitting this device in to the QL should be fairly straight forward.



We hope to bring you a step by step process of that in a future issue.

**COPY DATE for APR/MAY 2014 ISSUE is:
5th APR 2014**

Please ensure that your copy reaches the editor on or before that date. Copy on Paper, Magnetic Media or by Email. Text & listings are preferred in ASCII format as text files, Microsoft™ Word Documents or in QL Quill formatted files. All graphic submissions in as higher resolution as possible, preferably in PNG format, other forms of submission can also be accepted, please contact the Editor for details.

**All Contributions are Welcome
Copy by Email to - editor@quanta.org.uk**

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